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THIS ISSUE:

DEFENSE OF
WESTERN EUROPE

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DEFENSE OF WESTERN EUROPE: FIVE PROPOSALS

The defense of NATO rests upon a conventional defense that is patently inadequate and a nuclear response that is insufficiently credible. The problem is something like this.

In the first place, the threat to initiate the use of tactical nuclear weapons in Western Europe can be expected to wear thinner and thinner over the coming decades. Increasingly, the Russians prepare for the possibility that war in Europe might be conventional only, at least for a time. They need only complement these doctrinal preparations with a pre-invasion announcement that this is their desire. The likelihood that West Germany would then agree to the Western initiation of nuclear weapons on its soil can never be very high. And since the West would only initiate such use cautiously, in demonstration attacks rather than full-scale salvos, the Russians would always have the option, when and if the moment came, of just stopping.

As conventional war is now understood, no increase in numbers of troops can prevent an enemy from massing in a particular sector and breaking through. Since the front is not wide enough, and NATO is not strong enough, to respond to such an attack with a corresponding invasion of East Germany, any Soviet halt would leave the Warsaw Pact holding Western territory but NATO holding nothing to trade in negotiations for a return to the status quo ante.

Because the NATO conventional defense is somewhat more than a tripwire, at least a few days would transpire before these nuclear threats, and a subsequent possible halt, would occur. Because the Russians prepare their forces to wage offensive blitzkrieg warfare — no matter how or where war arises — the amount of West German territory they might hold before this halt could be secured could be substantial indeed.

It is true that, as time wore on, the West might be able to bring to bear comparable or greater amounts of force. But the Warsaw Pact has many geographical advantages — the war would be fought across the ocean from us but in the Soviet backyard. Whether our Navy could handle the Soviet submarine threat to shipping is anybody's guess and depends, among other things, on what technological developments are occurring in whatever decade the war takes place. There are many other unfortunate factors. Obviously, a lot of things have to go well if NATO is to hang onto all of what is, when put in perspective, a peninsular salient of the Eurasian continent, so much of which is dominated by the other side.

No doubt a large number of things can nevertheless be done to improve the ability of NATO to fight conventionally. A multifunctional coalition, without standardized weapons, with vulnerable depots, and with enormous logistic problems will always be open to improvements in military efficiency.

But Russian attack is already highly deterred and would occur only in very unusual situations. That being the case, most of the improvements in conventional warfighting capabilities that NATO might make are quite irrelevant to deterrence of an attack, and even their effect on the outcomes of an attack can only be problematical. We have to ask ourselves what really matters.

Alerting Forces

Recently, it has become fashionable to focus on the problem of a Soviet attack from a standing start — an unreinforced attack, sometimes called a "coup de main". It is argued, with considerable force, that this would leave NATO totally unprepared to fight, and that a Soviet force — backed by greater speed in initial mobilization — could raise such havoc in West Germany that the struggle would be lost before it got

—Continued on page 2

WILL THE FUTURE REVEAL A THIRD EUROPEAN WORLD WAR ?

The graph on page 7 suggests that the probability of nuclear war is on the order of 1% a year. The divided countries of World War II have already produced wars in Korea and Vietnam and divided Germany is now a military tinderbox. Only a fool can look with equanimity at our chances of avoiding a third outbreak of European war in the next hundred years or so. The differential economic capacities, and the tension in goals, between the Soviet Union and the controlled Eastern European states provide ample opportunity for sparks.

FAS has traditionally given too little attention to this problem. Precisely because the Council lacks depth of expertise on this issue, the drafter of its editorials has, in this case, simply signed his statement. It represents a fresh look at the problem and its literature, with all the advantages and disadvantages thereof, buttressed by a number of relevant interviews. The FAS Director, who has prepared over fifty such editorials in the last six years of his tenure, is a correspondingly experienced analyst and the FAS Council believes the reader will find this editorial insightful and thought-provoking. □

THREE PERSPECTIVES ON U.S. SALT PROPOSALS — page 7

Continued from page 1 started. This is a possibility. A review of the hard-fought 1973 Arab-Israeli war does confirm the enormous difference that various degrees of readiness can make. The leading Israeli military analyst, Major General Herzog, concludes that: "Had the Israeli forces but been mobilized in time, the Arab attack would have been destroyed at the outset."

That war and other experience confirm that the problem is really much worse than that of coping with unreinforced attacks. The Israeli case showed that even desperate and savvy nations, with world-renowned intelligence capabilities, may not mobilize when faced with the capacity for reinforced attacks.

Also, it stands to reason that a Soviet attack is likely to come only at such a time, and in such a way, that the intention behind Soviet maneuvers and mobilization has an ambiguous quality. The ambiguity will fragment any NATO consensus for spending the money, and alarming the NATO citizenry, that either alerts or full mobilization require. In particular, the most likely reason for a crisis will be unrest in Eastern Europe. Unfortunately, this unrest provides specific arguments against alerts and mobilization. Not wanting to give the Soviet Union a pretext for suppression of whatever regime is at issue, NATO is likely, as it did in 1968 with regard to Czechoslovakia, to remain entirely passive. At that time, it forbid the digging of trenches that could be seen from the other side and even canceled already scheduled maneuvers!

This likely reluctance to be ready is a major failing with overriding military consequences for deterrence. In fact, not to have alerted and mobilized when faced with the capabilities for invasion teaches the other side the wrong lesson — that NATO will never really be ready. Worse, in a crisis, a slowness to become prepared encourages the other side to transmute indecision into precipitate action under the slogan "now or never".

No doubt it is expensive to call such NATO-wide alerts — not only in financial, but in political, capital. And no doubt some will consider it dangerous also remembering, as they should, the race to mobilize that precipitated World War I. But NATO so clearly lacks either the force, the will, or the desire to unify Germany by force that there can be no question of its attacking. In this context, there is much greater danger, overall, in not being alerted than in being too ready. In short, one major military recommendation, really a sine qua non of any conventional defense, is to prepare for, take seriously, and even exercise some NATO-wide alerts.

Pushing Technology

There is a real possibility that technology is moving steadily in favor of the defense. In World War I, tanks eventually led the infantry through the barbed wire. But, significantly, in the most recent war, infantry have had to help the tanks along by suppressing the anti-tank weapons of the opposing infantry. The range and effectiveness of anti-armor weapons of many kinds are increasing, their cost is dropping, and they are becoming increasingly easy to

operate. For example, anti-tank guided missiles that originally had to be given on-going guidance instructions manually while in flight now guide themselves, if only the defender keeps a telescope fixed on the target. In due course, such weapons will have homing qualities.

Other advances in munitions (not to speak of the radiation threat of nuclear weapon use) are forcing the infantry to move in armored personnel carriers which are being armed and turned into combat vehicles from which their occupants can fight without dismounting. But these armored vehicles will face, a fortiori, the same kind of anti-armor weapons as the tanks.

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No doubt armor is improving too, and offensive tactics shift to respond to the threat. A measure-countermeasure game can be expected as efforts are made to neutralize the defensive technology.

Nevertheless new defense technology has sufficient promise that it might add to the high degree of deterrence we already have. It ought to be pushed and thought about. At the least, it will add major uncertainties, since neither side will be able to predict the outcome in real war of the various technological contests.

We ought not to assume implicitly however, that the best use of new weapons is simply adding them to existing forces. It may be that the defense should be built around groups of men too small to be easily suppressed. It may even be that weekend warriors in NATO could be prepared to use such weapons in a citizen defense. As Germany increasingly becomes urbanized, the possibilities for ambush abound in the concrete jungles fomed by every city and town. Indeed, these ready-made fortifications are already sprawling over such large parts of the countryside as to raise serious questions whether traditional large-scale military maneuvering is becoming impossible.

Coping With the Satellites

Another major asset for NATO exists in the loyalty to its goals of its citizens. By contrast, there must always be uncertainty in Soviet minds about the reliability of Eastern European allies so long as that alliance is compelled by force of arms. And since the crisis at issue is almost certain to have arisen from unrest in Eastern Europe, we should surely take this unreliability as a possibility that is given. Therefore, for reasons of simply humanity, if not of geopolitics, we ought to give each Eastern European member of the Warsaw Pact an opportunity to drop out of the conflict. Contingency plans should be formulated that would make reasonable specific requests of the states in question — requests that would differ in different cases. In return, commitments should be offered to withhold all or most fire from these territories. Planning should make it possible to make and keep these commitments. (In the interests of deterrence, it might be wise as well to let the Warsaw Pact know in advance that such wartime efforts would be made to split its ranks. There is little doubt that comparable efforts would be made by a Soviet leadership to split the NATO ranks.)

Raising the Specter of Two Against One

Another element in deterring an invasion of NATO lies in the existence and posture of China. America has, thus far, attempted to achieve an even-handed approach to these two giant Communist states. Obviously, this balance would be eliminated by any Soviet incursions, or threat of incursions, into NATO. Therefore, we might as well make it as evident as possible, in advance, that we would join with the Chinese in whatever military alliance they wanted (or would accept) were the Soviet Union to threaten us in this way.

The probability of war in Europe is now quite low. But by the same token, over decades, it is a formid-

able and serious danger to the security of the industrialized world. (As indicated in the graph on page 7 an extrapolation of the frequency with which wars of various sizes occur would suggest a nuclear war of major proportions about every hundred years). Some approach must be found to eliminate the problem.

Required: Political Solutions Rather than Arms Control

At the moment, an arms control solution is being pursued in the talks for mutual and balanced force reductions in Europe (MBFR). Here the U.S. is currently offering to withdraw 1,000 tactical nuclear weapons (of our 7,000) if the Soviet Union will pull a tank army back into the Soviet Union. Strategically, to a large extent, it is a proposal of nothing for nothing: reduction of some nuclear weapons in surplus for the pull-back of an army that can always be moved forward when crisis arises. In general, the talks are rather more likely to freeze force levels in Europe than to reduce them, by throwing every possible issue into a bargaining context in which *quid pro quos* — rather than economy and military necessity — become the desiderata.

The solution probably lies rather more in politics than in arms control. Over the next half century, the goal ought to be some kind of neutralization of Eastern Europe. The Russian fear of the overthrow of socialism in Eastern Europe will fade as it becomes evident that these societies have no way to reestablish capitalism; after all, to whom would the ownership of major production facilities now be given? Postwar generations of Poles, Czechs, Romanians, Bulgarians, and East Germans will have no problem living under socialism if they can run their socialized countries without interference in their national affairs.

So long as the Soviet Union is assured that these nations will not throw their lot in with NATO, and so long as NATO is as weak offensively as it is and will continue to be, Soviet occupation forces will be of diminishing necessity. Indeed, the presence of the troops can be expected to produce periodic unnecessary political problems for the Russians as each Eastern European ally tests, from time to time, the length of its ideological leash. Combined with Soviet economic problems, and disputes with China, both likely to continue for decades, the Russians might at some point be persuaded to save resources and consolidate their Western front with an agreement that provided — in pieces or all together, through agreements or in practice — some kind of guaranteed buffer in Eastern Europe.

In short, at first glance, the things that seem to matter most in defending NATO in this era are: 1) the determination to alert and mobilize; 2) Pursuing the tactics and technology of conventional defense; 3) preparing to give satellite armies the motivation to drop out; 4) cultivating close relations with the Chinese; and 5) looking toward political, rather than only arms control, negotiations to encourage Soviet withdrawal from the territory of their Eastern European allies.

—Jeremy J. Stone

SOVIETS SHOWING CONCERN OVER ANTI-TANK WEAPONS

"Compared to much of what passes for doctrinal thought in the West, Soviet commentary is the paragon of sophistication — the dynamic and detailed presentation of real issues of concern, frequently backed up by reference to real exercise data, and with a noticeable lack of political polemic." — Philip A. Karber, *The Tactical Revolution in Soviet Military Doctrine*, BDM Corporation, March 2, 1977.

Having almost lost their country in two devastating ground wars, it is easy to understand why the tactics of such conflicts are classic and fundamental problems for the Soviet military — to be pondered and studied at every level. By contrast, the American strategic literature is top-heavy with geopolitics, strategic nuclear doctrine, and a fascination with new technology independent of its tactical employment. We would all do well to watch the Soviet tactical literature on ground warfare and learn from it. What follows is a survey of the conclusions of the fascinating and recent review of Soviet debates cited above. The gist of Karber's report is simple: the Russians have not given up on the tank or the emphasis upon conventional offense but do believe that novel anti-tank weapons require new and ever more pre-emptive tactics. This is not good news.

The Soviet emphasis upon offense and maneuver has, as is well known, led them to put great stress on tanks and also on mobile infantry vehicles (BMPs). Immediately after the mid-East war, articles on anti-tank weapons increased in the Soviet Union by an order of magnitude as the Russians tried to decide what these new weapons would mean. Senior military officers, up to and including the late Defense Minister Marshal Grechko, warned that anti-tank weapons (whose development had just begun) might come to dominate tanks (whose traditional method of defense — increasing armor protection — was not likely to be adequate).

Apparently, the Russians are especially concerned that their BMPs will be particularly vulnerable to anti-tank weapons — a BMP is not so well armored, of course, as a tank — and that BMP vulnerability will preclude conventional offense which depends upon the survivability and mobility of motorized infantry.

If the infantry should be forced to dismount from the BMP, it would be vulnerable to the same new family of improved munitions which, indeed, induced Western armies to begin emphasizing the transport of infantry in armored personnel carriers, if not in mobile combat vehicles. Also, if the infantry is on foot, it cannot keep up with the tanks, hence cannot help in suppressing the enemy from firing its antitank weapons. Alternately, the tanks must slow down, thus become more vulnerable and losing one of their great advantages, speed.

According to Karber, the Russians saw, in 1975, two methods of keeping the offensive viable: nuclear weapons to suppress the defense or an increased emphasis on pre-emptive maneuver. They decided upon the latter and began to emphasize "daring thrusts". They observed that fixed prepared defenses of former years were less likely and that NATO motorized defense forces would provide instead a fluid environment in which meeting engagements (combat between two forces both of which are on the

NEITHER A CONVENTIONAL NOR A NUCLEAR DEFENSE EXISTS

"One constant among the elements of 1914 — as of any era — was the disposition of everyone on all sides not to prepare for the harder alternative, not to act upon what they suspected to be true."

— *Barbara Tuchman, Guns of August*, p. 39

The Conventional Truth

"... we have had to depend on a line of communication [i.e., communication, supply logistics, etc.] north to Bremerhaven which follows only a few miles behind the main defensive position of the allied forces. Thus, a shallow Soviet penetration of the front could quickly cut the logistic lifeline of the American Seventh Army — a penetration that could take place north of the American sector without involving a direct attack on our troops."

Gen. Maxwell D. Taylor, Precarious Security, p. 91

The Nuclear Truth

"If conventional forces proved inadequate, there would be some 7,000 tactical nuclear weapons in United States custody which could be released by the President for battlefield use; but the realism of this intermediate option between conventional and strategic nuclear warfare has always been highly uncertain."

— *ibid*, p. 90. □

move) would be common. In such a context, maneuver could be a key to success.

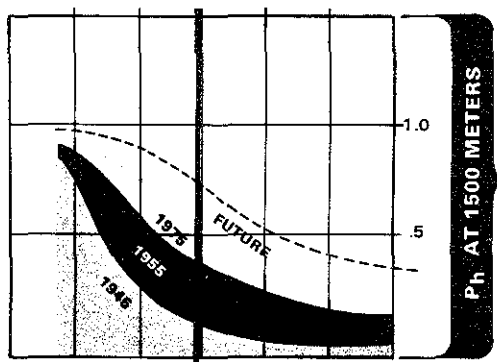
Ominously, a number of articles emphasize the importance of surprise in supporting maneuver. Karber feels that the Soviet authorities — always sensitive to ratios of force to space — are more worried about the density of anti-tank weapons than about their technological parameters. In such an event, they might prefer to rely upon unreinforced attacks (that caught the defense by surprise before it could get its anti-tank defenses ready) rather than to wait for Soviet reinforcements.

Infantry would move in their BMPs, armed heavily with anti-tank weapons, as deeply as they could before meeting strong opposition and then dig in. The counter-attacking NATO forces would then be impaled on the Soviet anti-armor defenses. These daring thrusts would be made possible by the Soviet consciousness of the absence, in NATO, of prepared linear defenses in depth of anti-tank weapons.

Karber reports that the Soviets themselves see as unresolved: logistics support for the daring thrust, air support and defense. He believes that they assume the conventional phase of the war would last only a few days. In their view, either a losing defender will initiate the use — as indeed NATO threatens to do — or a bogged-down attacker will use nuclear weapons to open up holes in the defense, or both.

Karber urges a three-fold increase in anti-tank guided missiles to a level of at least 10,000; greater combat readiness; more attention to conventional war-fighting capability rather than reliance on tactical nuclear deterrence; the construction of tactical defensive positions near the border which could be quickly manned; and the re-examination of NATO tactical nuclear weapon doctrine. □

TANK EFFECTIVENESS INCREASES



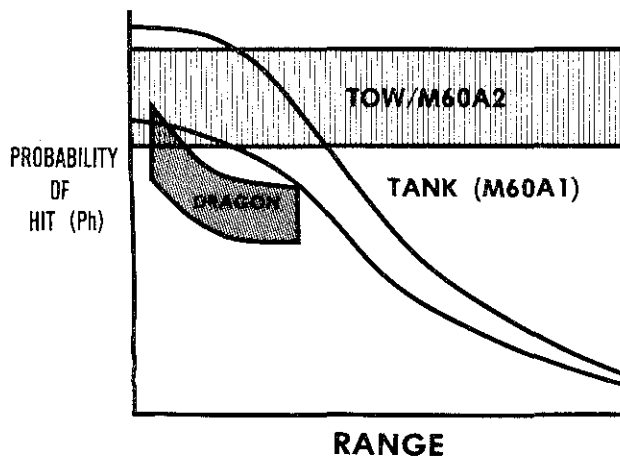
* Ph = Probability of hit.

Gun size, muzzle velocity and laser range finders increase hit probabilities tenfold.

BUT CREWS MUST BE RETRAINED OFTEN TO FIRE TANKS AND GUIDED MISSILES EFFECTIVELY.

PERFORMANCE GAP

"HIGH PERFORMANCE" CREWS* VS "LOW PERFORMANCE" CREWS**



This DOD chart shows that there is a big difference in the probability of hit between the high performance and low performance crews. The probability limits are independent of range for the M60A2 tank armed with TOW missile and the difference between the high performance and low performance crews is also independent of range for the DRAGON missile. For the M60A1 tank armed with cannon, the difference between crews declines as the probability of hit declines with range.

TANK WARFARE IN CENTRAL EUROPE

The U.S. is modernizing M48 tanks, producing M60 tanks, and moving toward the production of the new XM-1 tank. Using passive night sights, laser range-finders, and new computers, the effectiveness of even the old tanks has been much improved. The XM-1 is thought to be 250% improved over the M60 in combat effectiveness, and has twice the horsepower of the emerging new Soviet tank, the T-72.

The number of shots necessary to destroy a tank with a tank is declining rapidly. To hit a stationary tank at a range of 1500 meters with 50% probability, the World War II Sherman tank would have had to fire 13 rounds, the Korean War medium tank 3 rounds, and the current U.S. medium tanks only one round — this despite the fact that the armor to be penetrated has doubled from 4.8 to 9.5 inches.

This accuracy is partly because laser range-finders have reduced errors in range estimation to about 10 meters and done so quite independently of the range, thus eliminating the largest cause of tank misses. Probabilities of kill with tank cannon are still rising, as noted in the adjoining graph.

The tanks are now firing anti-tank guided missiles as well as cannon rounds, and these can do still better — hitting tank-size targets 90% of the time at 3,000 meters (two miles). Thermal imagery sights make it possible for the tank commanders to "see" that distance at night. With invisible infrared beams, they can also illuminate targets to 1,500 meters or simply use passive night vision devices that magnify natural starlight.

In short, night vision devices are reaching the point where anti-armor weapons will be able to maneuver and engage the enemy quite as well at night as during the day.

For destroying tanks without a tank, the United States has a long-range (2-mile) anti-tank missile, called TOW because it is launched from a Tube, tracked Optically, and guided by Wire. With container, it weighs about 60 pounds and is mounted on a tripod. While the anti-tank missile is in flight, the defender must keep his sights on the tank through a 13-power telescope. If he does, the missile is automatically guided through the wire to the target. In theory, he could fire at 3 targets every 60 seconds. (The defender need not "fly" or guide the missile to the tank manually as is required on the Soviet equivalent, the "Sagger"; but, on the other hand, the missile does not "home" in on the tank).

This kind of semi-automatic guidance requires that the defender stand fast, often while exposed, while the missile is in flight. (This can take 15 seconds). The enemy is naturally instructed to fire at him because, if he ducks, or is hit, the missile will not be guided to the target. The missile costs about \$3,000 and the guidance unit about \$20,000. (An air-launched anti-tank missile Maverick, guided by television in its nose, cost about \$10,000 in 1974 and can be fired from 20 kilometers away).

The medium range (1/2 mile) anti-tank missile is called Dragon. Like TOW, it is being equipped with thermal (heat-using) night sight for periods of darkness or low visibility. A short-range anti-tank missile exists called LAW.

Armor penetrating power of anti-tank weapons has

—Continued on page 6

Continued from page 5

been outrunning armor thickness since 1945 and has reached 18 inches or *double* the maximum thickness of armor in Warsaw Pact tanks. Crew-operated anti-tank weapons of both sides can achieve 50% probability of kill at over 3,000 meters, while individually manned anti-tank weapons can do the same at 1,000 meters.

Anti-tank mines have also become much smaller and more powerful and can be easily delivered by scattering rather than by hand-emplacement. Thus mines that used to take an infantry company eight hours to install can be emplaced in minutes directly in front of, an advancing armored column (see below).

A remaining problem in destroying advancing armor is that the range of anti-tank weapons is outrunning the line of sight in the German terrain. There are so many hills, streams, small forests, and villages that it is not easy to find long-range fields of fire for tanks or anti-tank guided missiles. On the North German plain, a tank moving as little as 75 meters has a 50-50 chance of disappearing from view. This means that even if the tank is moving at low or medium speeds of four to eight miles per hour, soldiers firing anti-tank missiles must detect and acquire the target in 10, or at most 20, seconds if the tank is not to escape by disappearance. (See adjoining graph).

Urbanization is becoming important. According to the Army's FM-100-5:

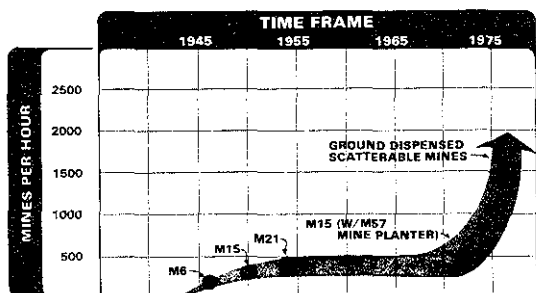
"The urbanization of Germany has a *major* impact on military operations. German buildings are sturdy brick, stone, and concrete. Buildings provide cover and concealment for troops. Villages provide natural strong points. Built-up areas restrict visibility and fields of fire. Buildings provide natural shelter and concealment for headquarters and support activities. They also make target acquisition more difficult. "Combat in Germany will automatically involve repeated, almost continuous battle for cities, towns, villages, and adjacent built-up areas. Depending upon the province, parts of Germany vary from being 7% to 15% built-up areas."

The manual warns in italics:

"... the decision to attack or defend a city may be tantamount to a decision to destroy it."

And it concludes:

"Major urban complexes such as Frankfurt/Mainz/Hanau or the Stuttgart area are so large that they cannot be captured or defended in their entirety, and they cannot be avoided by bypassing. The commander has no choice but to conduct the whole range of military operations within them — attack, defense and retrograde. These areas have the characteristics of a concrete jungle, and as in any jungle, visibility is reduced and cover and concealment abound." □



This chart depicts almost a fourfold increase in the mine laying capacity of one engineer platoon.

SOVIETS DO NOT PLAN TO FIGHT DEFENSIVELY

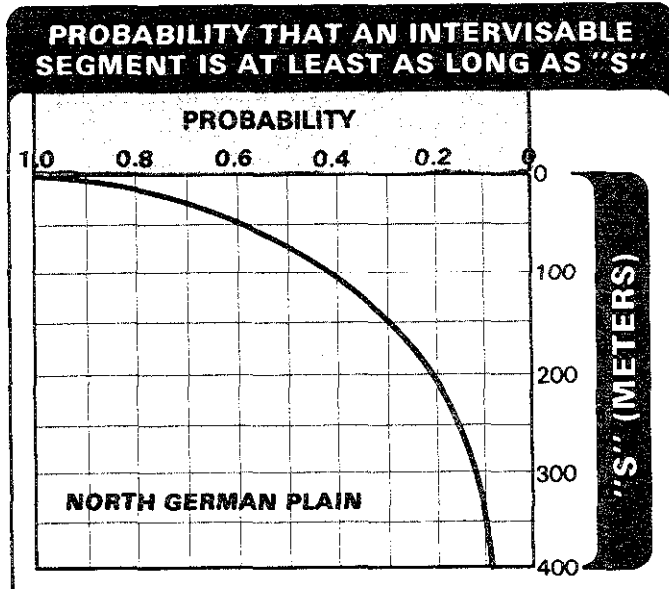
As did everyone in World War I — French, Germans, and Russians — the Russians believe in the offensive. The introduction to a widely read Soviet military work, "The Offensive" begins:

"The century-old military history, including the history of the Soviet Armed Forces, is convincing evidence that in an armed conflict of any scale — be it an engagement of battalion, regiment, division or along an entire front — only the offensive leads to the attainment of victory over the enemy."

The book explains that the offensive has "incontestable advantages over the defense," gives examples from the First World War, and notes that the "swift development" of the breakthrough was learned in that war and developed in the Second World War. □

TYPICAL MINIMUM SEGMENT LENGTHS (METERS) FOR SUCCESSFUL ENGAGEMENTS							
RANGE (METERS)	APPROX. MISSILE FLIGHT TIME (SECONDS)	TANK SPEEDS (MILES PER HOUR)	DETECTION AND ACQUISITION TIMES (SECONDS)				
			10	20	30	40	60
1000	5	4	27	46	63	81	117
		8	54	90	126	162	234
		13	90	150	210	270	390
2000	10	4	36	54	72	90	126
		8	72	108	144	180	252
		13	120	180	240	300	420
3000	15	4	45	63	81	99	135
		8	90	126	162	198	270
		13	135	190	270	330	450

SEGMENT LENGTH IN METERS



U.S. SALT PROPOSALS: THREE DIFFERENT PERSPECTIVES

How one views the Carter SALT proposals depends upon what one does for a living. There are at least three different perspectives: that of the arms controller; that of the political leader; and that of the military strategist.

The arms controller typically asks whether the agreement is "fair" according to common sense; whether it provides a "stable" balance; and whether it advances the cause of disarmament.

The political leader must moderate political pressures and thus tends to ask how much political capital it will cost him to create and maintain a political consensus in favor of the agreement. How hard will it be for him to get from "here to there"?

The gimlet-eyed military strategist may be less concerned with fairness and politics, and more with military advantage. In particular, he can be expected to be mentally comparing the proposal with what will occur in the absence of an agreement along these lines.

The Proposal

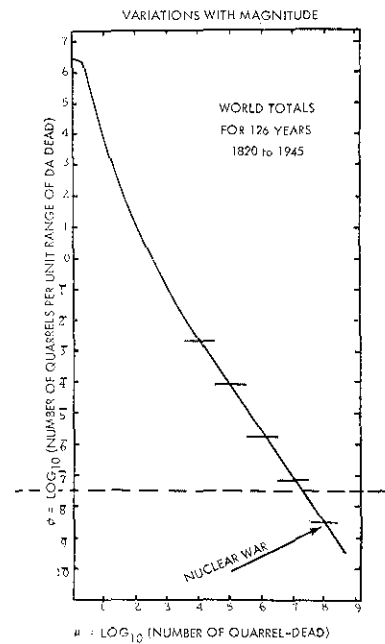
From the point of view of the arms controller, much in the Carter proposal seemed roughly equitable. The proposal gave each side the same overall total number of strategic bombers and ballistic missiles — 1,800 to 2,000 on each side. It would give each side the same number of MIRVs — 1,100 to 1,200. It would limit each side to 550 MIRVed land-based missiles. It would preclude mobile missiles on each side. It would permit each side the same small number of flight tests of missiles each year; the number was 12, to be divided equally between tests of land-based and tests of sea-based missiles.

Counting the bombs on bombers and the ballistic missile warheads, the United States would have an advantage in "force-loadings" because we have so many bombers. Looking at ballistic missile warheads only, the Soviet Union and the United States would have about the same number. (The possibility of counting bombers with cruise missiles as MIRVed was a part of the U.S. proposal. When National Security Adviser Brzezinski gave a briefing on it but this option was deleted in texts of his briefings published later.)

The Soviet Union would be permitted 150 large missiles where the United States has no real counterpart. But it has 300 such missiles now and would have to eliminate 150. Overall its throw-weight would be greater if missiles alone are counted, but not if bombers are included.

Of major importance, the stability of the balance would be enhanced on both sides by the restriction on flight tests of missiles. It is believed that neither would achieve much confidence in the accuracy of its missiles with only 12 flight tests per year. This might be five or ten times fewer than occur currently. Thus the vulnerability of land-based ballistic missile to land-based ballistic missile would be inhibited. The overall restriction proposed on modernization of missiles would tend to enhance this effect. (Presumably it would include the Mark 12A discussed in the April Report if negotiations got moving in time).

Above all, the plan involves a 25% reduction of the Vladivostok limits in numbers of missiles and a 10 or 20% reduction in MIRVed vehicles permitted. Thus it



PROBABILITY OF NUCLEAR WAR = 1% PER YEAR

in his "Statistics of Deadly Quarrels", Lewis F. Richardson plotted the rate at which frequency of wars decreased in proportion to their size, using as a base the period 1820-1946. Responding to a footnoted invitation, Jack C. Greene extrapolated the graph to (presumably nuclear) was of size 300,000,000 dead and calculated the resultant frequency to be on the order of 1% per year ("The Case for Civil Defense as Developed Through Systems Analysis" OCD/DOD). Reproduced above, the log-log graph plots numbers of quarrels per size of quarrel against size of quarrel.

advances disarmament. On the other hand, it permits unlimited numbers of cruise missiles on bombers and could easily produce as many nuclear warheads on bomber-carried cruise missiles — 3,000 — as ballistic missiles are permitted in the entire Carter proposal!

The Political Leader

The reasonableness of the Carter proposal from an arms control perspective is not matched by its reasonableness from the point of view of, say, Brezhnev. From his perspective, it looks like "something for nothing". The Soviet Union would give up four hundred to six hundred vehicles below Vladivostok limits — which it is currently somewhat above — while the United States would lose zero to 200 vehicles. The Soviet Union would have to reduce its large missile program by half, from 300 deployed to 150 — no comparable U.S. reduction would be necessary. The United States would be able to stand pat also with its existing MIRVs, both on land (550) and on sea (496); the total is 1046, or less than 1100. The Soviet Union has just begun to MIRV and while, for that reason, it would not have to throw away MIRVs either, it would have to interrupt an ongoing MIRV program. Also, it may not have planned to divide its MIRVed force so evenly between land- and sea-based forces as our proposal requires and as we have already done.

Continued from page 7

The agreement to forego mobile missiles on each side also seems less balanced from the political than from the arms control perspective, since the Soviet program is further underway than our program for the MX missile and because it is unclear whether America really has a consensus for building MX.

The flight-test ban also leaves the Soviet Union caught at a level where its missiles are less tested, one would suppose, since we are further into the MIRV era by five years. In particular, the Soviet submarine MIRV program has only just begun.

Above all, the Soviet leaders have twice agreed to U.S. proposals, presumably using up considerable capital in the process, only to find that the situation has changed. The Vladivostok agreement, though still secret, clearly used the word "missile" where the United States now wishes to use the phrase "ballistic missile" so that it can place its cruise missile technology on bombers. And after the Russians thought they had an agreement with Henry Kissinger on how to handle this disagreement (and the one we raised about the medium bomber Backfire), the Ford Administration refused to accept the agreement and the Carter Administration decided to start the bargaining over from that point.

The Military Strategist

The most gimlet-eyed negotiators are typically comparing potential agreements with the prospects in the event that no agreement is reached. Before the Carter proposal — and its inevitable subsequent warnings of what would happen if negotiations were not pursued seriously by the other side — the absence of agreement seemed to mean a continued quiet Soviet modernization and development with a minimum of ICBM modernization here. (MX might or might not have been built to supplement our land-based Minuteman III.) But after the Carter proposal gave birth to warnings that the Soviet Union had better negotiate seriously, Soviet generals had to foresee a considerably more vigorous possible response in the event that agreement was not reached. Thus the proposal has itself changed the structure of the bargaining. It improves the prospects for an agreement of the kind the U.S. wants, while enhancing the prospect that, if negotiations fail, U.S. weapon expenditures will increase.

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THE SOVIET DECISION

The *Pravda* editorial of April 13 took the view that it was unreasonable to consider the Carter 25% reductions without taking into consideration the fact that we — but not they — had forward-based systems which could reach the Soviet Union. It argued that if both sides continued in that fashion, there would be complete disarmament of strategic weapons and they, but not we, would be vulnerable to nuclear attack from forward-based systems. Thus they began to withdraw what had been the major Soviet concession, overlooking such systems in SALT.

Pravda expressed concern that the new Administration was not willing to begin where the old Administration had left off and said:

"The two sides did not only agree in principle on including strict limitations on cruise missiles in the agreement being prepared but jointly worked through concrete variants of such limitations during talks in 1975-1976."

According to *Pravda*, it had been agreed that bombers with cruise missiles over 600 kilometers in range would be considered MIRVed vehicles. (Agreement had not been reached on cruise missiles).

Thus it rejected both the new comprehensive proposal and the proposal to return to discussing Vladivostok without consideration of cruise missiles and Backfire. □

CIRCULATION OF ANONYMOUS MEMOS

When Paul C. Warnke was attacked by means of an anonymous memorandum, FAS complained to the Ethics Committee. A staff member of the Senate Republican Policy Committee had circulated the memo on White House stationery.

The Ethics Committee decided:

"No rule of the Senate has been violated in these circumstances, nor in the judgment of the Committee would it be wise to prohibit the circulation of all memoranda unless authorship was identified. The circulation of anonymous statements or statements bearing pseudonyms is a practice that is not without healthy historical precedents. It is not a practice that this Committee can approve or disapprove."

The Committee noted that it would raise a different question if staff members were circulating facts which were "defamatory, scurrilous or libelous of a person or group". □

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